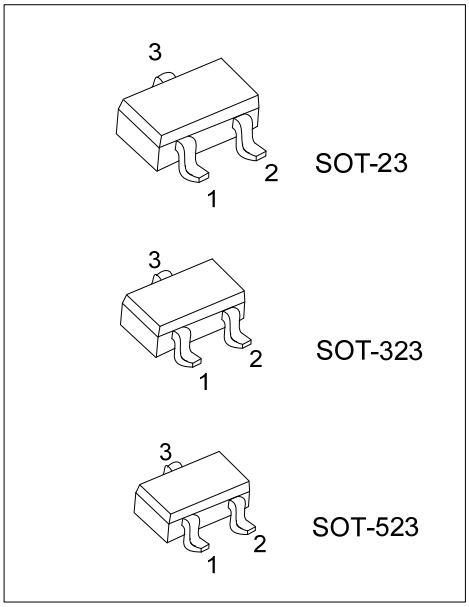
DTA143T

PNP SILICON TRANSISTOR

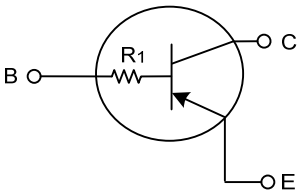
DIGITAL TRANSISTORS (BUILT- IN BIAS RESISTORS)



■ FEATURES

* Built-in bias resistors that implies easy ON/OFF applications.
* The bias resistors are thin-film resistors with complete isolation to allow positive input.

■ EQUIVALENT CIRCUIT



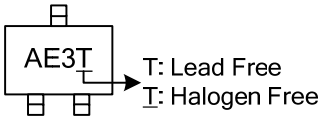
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
DTA143TG-AE3-R	DTA143TG-AE3-R	SOT-23	B	E	C	Tape Reel
DTA143TG-AL3-R	DTA143TG-AL3-R	SOT-323	B	E	C	Tape Reel
DTA143TG-AN3-R	DTA143TG-AN3-R	SOT-523	B	E	C	Tape Reel

Note: Pin Assignment: B: Base E: Emitter C: Collector

DTA143TG-AE3-R (1)Packing Type (2)Package Type (3)Green Package	(1) R: Tape Reel (2) AE3: SOT-23, AL3: SOT-323, AN3: SOT-523 (3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	-50	V
Collector-Emitter Voltage		V_{CEO}	-50	V
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current		I_C	-100	mA
Collector Power Dissipation	SOT-23/SOT-323	P_C	200	mW
	SOT-523		150	mW
Junction Temperature		T_J	+150	°C
Storage Temperature		T_{STG}	-40 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

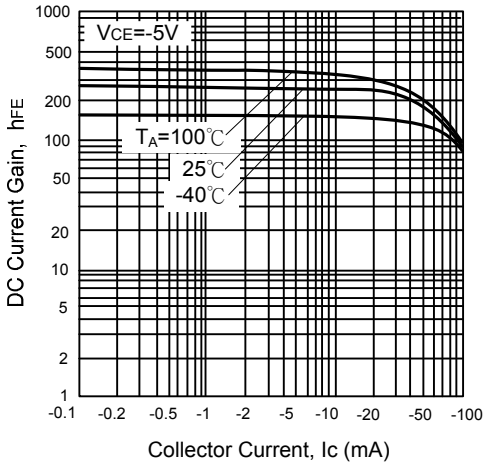
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	BV_{CBO}	I_C=-50μA	-50			V
Collector-emitter breakdown voltage	BV_{CEO}	I_C=-1mA	-50			V
Emitter-base breakdown voltage	BV_{EBO}	I_E=-50μA	-5			V
Collector cutoff current	I_{CBO}	V_{CB}=-50V			-0.5	μA
Emitter cutoff current	I_{EBO}	V_{EB}=-4V			-0.5	μA
Collector-emitter saturation voltage	$V_{CE(SAT)}$	I_C=-5mA, I_B= -0.25mA			-0.3	V
DC Current Gain	h_{FE}	V_{CE}=-5V, I_C= -1mA	100	250	600	
Input resistance	R_1		3.29	4.7	6.11	kΩ
Transition frequency	f_T	V_{CE}=-10V, I_E=5mA, f=100MHz (Note)		250		MHz

Note: Transition frequency of the device

■ TYPICAL CHARACTERISTICS

DC Current Gain vs. Collector Current



Collector-Emitter Saturation Voltage vs. Collector Current